

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/312,841 05/17/99 WASHIZAWA

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005514 WM31/0327
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NEW YORK NY 10112

EXAMINER

DESIRE, G

| ART UNIT | PAPER NUMBER |
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2621

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DATE MAILED:

03/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|-------------------|----------------------|
| Office Action Summary | Application No. . | Applicant(s) |
| | 09/312,841 | WASHIZAWA, TERUYOSHI |
| | Examiner | Art Unit |
| | Gregory M. Desire | 2621 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 May 1999.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are objected to by the Examiner.

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) Notice of References Cited (PTO-892)

16) Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

18) Interview Summary (PTO-413) Paper No(s) _____

19) Notice of Informal Patent Application (PTO-152)

20) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Aono et al.

Regarding apparatus and method claims 1 and 8 Aono discloses,

Transformation means for transforming data space of an input image to multi-resolution space outputting a multi-resolution representation of the input image (Transforming input image from data space to rotation angle parameter, scale parameter or 2 shifting parameters, note fig. 1 blocks 12-13 lines 35-45, provides different transformations in multidimensional space.);

Detecting means for detecting a singularity in the input image (as disclosed in specification page 18 lines 20-22, detecting singularity is merely detecting an edge or feature point (note col. 4 lines 45-47);

Extracting means for extracting a local pattern, which is formed by a spatial arrangement of intensities of the multi-resolution representation in a partial area containing the detected singularity, with regard to partial areas of plurality of sizes (a pattern is extracted based on points or edges, note col. 9 lines 1-10);

Quantizing means for creating a quantization code book based upon the extracted local pattern and replacing said multi-resolution representation by a code word using the code book (a code book is created based on extracted point note col. 9 lines 30-40); and

Encoding means for algebraic encoding code data which includes position coordinates of the singularity in said multi-resolution representation and the code word provided by said quantizing means (note fig. 1 block 15 encoding means);

Regarding apparatus and method claims 2 and 9 Aono discloses,

Counting means for counting frequency of occurrence of said local pattern, wherein said quantizing means creates a code book based upon results of counting performed by said counting means (note col. 10 line 65- col. 11 line 3).

Regarding apparatus and method claims 3 and 10 Aono discloses,

Structuring means for detecting an inclusion relation of any two representative vectors have been registered in said code book, and structuring said code book (note col. 9 lines 43-46 pattern match detects inclusion relation between vectors stored in code book.).

Regarding apparatus and method claims 4 and 11 Aono discloses,

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Memory means for storing degree of quantization error calculated by said quantizing means, when the local pattern is allocated to a representative vector (note col. 6 lines 22-30).

Deciding means which on the basis of the degree of conformity or quantization error, is for deciding the order relating to the perspective depth between any two representative vectors contained in the code data (note col. 6 lines 40-49);

Regarding apparatus claim 5 Aono discloses,

Wherein image processing apparatus is applied to image recognition to retrieve image data from partial image (note the image is divided into low and high frequency domain).

Regarding method and apparatus claims 6 and 12 Aono discloses,

Inverse quantizing means (note fig. 1 block 21)

Synthesizing means for combining a plurality of local patterns, which have been generated by said inverse quantizing means based upon position coordinates of a singularity decoded by said decoding means (note fig. 1 block 22)

Regarding apparatus claim 7

Comprising memory means for storing code data and outputting the code data stored in said memory means (note fig. 1 block 19).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (703) 308-9586. The examiner can normally be reached on M-F (8:30-6:00) Second Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreux can be reached on (703) 305-4706. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-5397 for regular communications and (703)308-5937 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Gregory M. Desire
Examiner
Art Unit 2621

G.D.
March 25, 2001

Matthew C. Bella
Primary Examiner

